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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/747,782	12/29/2003	Dilip M. Ranade	VRT0113US	6424

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EXAMINER

ALAM, SHAHID AL

ART UNIT	PAPER NUMBER
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2162

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/747,782

Applicant(s)

RANADE, DILIP M.

Examiner

Shahid Al Alam

Art Unit

2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2004.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1 - 16, 18 - 22, 24 - 29, 31 - 37, 40 - 41, 43 - 45 and 47 is/are rejected.
7) ☒ Claim(s) 17, 23, 30, 38, 39, 42 and 46 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 29 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11052004.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 – 47 are pending in this Office action.

Claim Objections

2. Claims 17, 18, 30 and 31 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 17 and 18 are system claim and should depend on claim 14 and not on claim 1 because claim 1 is a method claim. Claims 30 and 31 are system claims and should depend on claim 26 and not on claim 1 because claim 1 is a method claim.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1 – 18, 26 – 39 and 44 – 47 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

MPEP 2106 IV.B.2.(b)

A claim that requires one or more acts to be performed defines a process. However, not all processes are statutory under 35 U.S.C. 101. *Schrader*, 22 F.3d at 296, 30 USPQ2d at 1460. To be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application in the technological arts is either disclosed in the specification or would have been known to a skilled artisan, or (B) be limited to a practical application within the technological arts.

Art Unit: 2162

Claims 1 – 18, 26 – 39 and 44 – 47, in view of the above-cited MPEP sections, are not statutory because they merely recite a number of computing steps without producing any tangible result and/or being limited to a practical application within the technological arts. **The use of a computer has not been indicated.**

These claims do not indicate use of hardware on which the software runs to perform the steps recited in the body of the claim. Software or program can be stored on a medium and/or executed by a computer. In other words the software must be computer-readable. **The use of a computer is not evident in the claim.** MPEP 2106.IV.B.1(a) refers to “computer-readable” medium with computer program encoded on it.”

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 – 16, 18 – 22, 24 – 29, 31 – 37, 40 – 41, 43 – 45 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication number 20040158588 A1 issued to Clarence Pruet, III (“Pruet”) and in view of U.S. Patent Application Publication number 20040254964 A1 issued to Shoji Kodama et al. (“Kodama”).

With respect to claim 1, Pruet discloses a method comprising:

in response to obtaining first data for replication to a secondary storage area, causing an indicator to be set for a first location, wherein the first data are stored in the first location of a first storage area (para [0040]), and the indicator indicates that the first data are unsynchronized with corresponding data in a corresponding location of the secondary storage area (para [0041]); and causing an entry to be added to a list of entries for the first location, wherein each entry in the list is related to an update to data in the first location (para [0042]).

Pruet does not explicitly teach the list can be used to **reset the indicator** for the first location as claimed. However, Kodama discloses claimed list can be used to **reset the indicator** for the first location (Kodama; para [0137]).

It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to combine the teachings of Pruet with the teachings of Kodama to enable multiple-accessing of data while avoiding the data re-loading and to enable a multiplicity of intermediate data results to be stored/restored without resorting to storing all data updates, as might otherwise unnecessarily utilize available storage space (Kodama; para [0012 and 0017]).

As to claim 2, adding an update identifier to the entry (Kodama; para [0137]).

As to claim 3, writing a record to a transaction log, wherein the record comprises the first location (Pruet: [0037]).

Art Unit: 2162

As to claim 4, in response to receiving an acknowledgement that the first data have been received at the secondary storage area, causing the entry to be removed from the list of entries for the first location (Pruet: [0034]).

As to claim 5, in response to receiving an acknowledgement that the first data have been received at the secondary storage area (Pruet: [0034]), causing the first location to be removed from each active transaction of at least one active transaction in the transaction log (Pruet: [0046]); and if one active transaction of the at least one active transaction in the transaction log is completed, writing a second record to the transaction log indicating that the one active transaction is complete (Pruet: [0041]).

As to claim 6, in response to the writing the second record to the transaction log, freeing space in the transaction log previously used by the one active transaction (Pruet: [0042]).

As to claim 7, in response to removing the entry from the list of entries for the first location, determining whether the list of entries for the first location is empty, and if the list of entries for the first location is empty, resetting the indicator for the first location (Pruet: [0041, 0042 and 0043]).

As to claim 8, in response to removing the entry from the list of entries for the first location, determining whether the list of entries for the first location is empty, and if the list of entries for the first location is empty, causing the indicator for the first location to be reset (Pruet: [0041, 0042 and 0043]).

Art Unit: 2162

As to claim 9, the causing the entry to be removed from the set list of entries for the first location comprises removing the entry from the list of entries for the first location (Pruet: [0041, 0042 and 0043]).

As to claim 10, the causing the indicator to be set comprises setting the indicator (Pruet: [0040]).

As to claim 11, the causing the entry to be added to the list of entries for the first location comprises adding the entry to the list of entries for the first location (Pruet: para [0041], As log records are transferred from the primary server log buffer to the primary server log file, the buffered log records . . . replication component).

As to claim 12, if an acknowledgement that the first data have been received at the secondary storage area is not received, causing the indicator to be written to a persistent storage area (Pruet: para [0039 and 0040]).

As to claim 13, using the indicator to synchronize the first data in the first location of the first storage area with the corresponding data in the corresponding location of the secondary storage area (Pruet: para [0040]).

The subject matter of claim 31 is rejected in the analysis in claim 1 above, and this claim is rejected on that basis.

As to claim 32, a file system sets the indicator for the first location; and the file system adds the entry to the list of entries for the first location (Pruet: para [0040]).

As to claim 33, a replicator receives the acknowledgement; and the replicator causes a file system to remove the entry from the list of entries for the first location (Pruet: para [0034 and 0046]).

As to claim 34, a replicator receives the acknowledgement; the replicator causes a file system to remove the first location; and the file system writes the second record indicating that the one active transaction is completed (Pruet: para [0039, 0040 and 0046]).

As to claim 35, the file system resets the indicator (Kodama; para [0137]).

As to claim 47, the file system resets the indicator (Kodama; para [0137]).

Claims 14 – 16, 18, 36 – 37 are essentially the same as claims 1 – 13, 31 – 35 and 47 except that they set forth the claimed invention as a system rather than a method and rejected for the same reasons as applied hereinabove.

Claims 19 – 22, 24, 25, 40, 41 and 43 are essentially the same as claims 1 – 13, 31 – 35 and 47 except that they set forth the claimed invention as a computer-readable medium rather than a method and rejected for the same reasons as applied hereinabove.

Claims 26 – 29 and 44 – 45 are essentially the same as claims 1 – 13, 31 – 35 and 47 except that they set forth the claimed invention as a system rather than a method and rejected for the same reasons as applied hereinabove.

Allowable Subject Matter

5. Claims 17, 23, 30, 38, 39, 42 and 46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2162

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shahid Al Alam whose telephone number is (571) 272-4030. The examiner can normally be reached on Monday-Thursday 8:00 A.M.- 4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shahid Al Alam
Primary Examiner
Art Unit 2162

7 August 2005